

REMARKS

I. Status of the Claims

Claims 1-160 are pending in this application. Claims 75-156, 159, and 160 have been withdrawn as being directed to non-elected subject matter. Claims 1-74, 157, and 158 are under examination.

In the present Amendment, Claim 1 has been amended to explicitly recite the pH value of the composition being effective to lanthionize the keratin fibers. Applicants have not introduced any new matter by the amendments, nor are any estoppels intended thereby. The composition of Claim 1 as originally filed is for lanthionizing keratin fibers and the pH value of such a lanthionizing composition was inherently present in Claim 1 prior to the instant amendment. Further, the amendment does not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner. Therefore, Applicants respectfully request that the present Amendment be entered by the Examiner, placing the pending claims in condition for allowance, or at least in a better condition for an appeal, if necessary.

II. Rejection under 35 U.S.C. § 102

The Examiner has maintained the rejection of claims 1-5, 9-15, 17-24, 26-32, 34-40, 44-50, 52-59, 61-67, 69-73, 157, and 158 under 35 U.S.C. § 102(b) as being anticipated by Kolc et al. (U.S. Patent No. 5,223,252) ("*Kolc*"). Final Office Action, pages 2-3. Applicants respectfully disagree and traverse this rejection for at least one of the following reasons.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” M.P.E.P. § 2131 (quoting *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)) (emphasis added). Further, a rejection under § 102 is proper only when the claimed subject matter is identically described or disclosed in the prior art. *In re Arkley*, 455 F.2d 586, 587 (CCPA 1972) (emphasis added). The identical invention must be described in as complete detail as is contained in, and must be arranged as required by, the claim. M.P.E.P. § 2131.

First, the Examiner has failed to establish that each and every element in claims 1-5, 9-15, 17-24, 26-32, 34, 35, and 157 of the present invention is either expressly or inherently described in *Kolc*. Specifically, *Kolc* does not expressly or inherently teach “the composition has a pH value effective to lanthionize the keratin fibers” as cited in, for example, Claim 1 as amended of the present invention.

As known by one of ordinary skill in the art, the term “lanthionize hair” means “permanently straighten hair.” See the Declaration under 37 C.F.R. § 1.132 concurrently filed with this Submission (“Rule 132 Declaration”), page 2. As the Examiner admits, *Kolc* “teaches a mild alkaline reducing composition for permanently waving or reshaping human hair.” Final Office Action, page 2 (emphasis added). A reducing composition for permanently waving is different from a lanthionizing composition for permanently straightening. As explained in *Kolc*, a reducing composition can cause the disulfide bonds in the hair to be broken and such disulfide bonds using two sulphur atoms on adjacent polypeptide chains ($-\text{CH}_2-\text{S}-\text{S}-\text{CH}_2-$) can be “relinked or reestablished” using “an oxidizing agent, such as hydrogen peroxide or a

water-soluble bromate.” *Kolc*, col. 1, lines 42-50 (emphasis added). In contrast, as explained in “*Milady’s Hair Structure and Chemistry Simplified*” by Douglas D. Schoon, pages 191-192 (“*Schoon*”) submitted by Applicants on February 5, 2004, a lanthionizing composition can also cause the disulfide bonds in the hair to be broken, but form “a single sulphur cross-link bond” ($-\text{CH}_2-\text{S}-\text{CH}_2-$), i.e., a “lanthionine cross-link,” which is a irreversible process. *Schoon*, at page 192 (emphasis added). In other words, a reducing composition, which is usually followed by application of an oxidizing agent as disclosed in *Kolc*, leads to a different chemical modification to the hair than a lanthionizing composition.

In addition, the pH value of a reducing composition is usually not high enough to cause lanthionizing, i.e., permanently straightening, because the formation of the lanthionine cross-link requires “[h]ighly alkaline products” with pH levels between 12 and 13.5. See *Schoon*, at pages 191-192. One example of the “[h]ighly alkaline products” is sodium hydroxide, which can sometimes provide pH levels of greater than 13.5. *Id.* at page 191.

The reducing compositions disclosed in *Kolc* have a pH value ranging from about 7.5 to about 9.5, such as Composition 3 which has a pH value of 7.5. The compositions of *Kolc* do not have sufficiently high pH values to lanthionize hair. See Rule 132 Declaration, page 2. Therefore, consistent with the disclosure of *Kolc*, the compositions disclosed in *Kolc* are reducing compositions, but not compositions for lanthionizing keratin fibers.

Nevertheless, the Examiner alleges that *Schoon* “teaches that the low pH reducers are used as the relaxers and are recommended for thin or brittle hair (see

page 1[9]1, paragraph 5).”¹ Final Office Action, page 5. The Examiner further alleges that because the composition disclosed in *Kolc* “has the same ingredients [as those] recited in the instant claims,” it “should have identical chemical properties includ[ing] the lanthionization property.” Advisory Action dated January 10, 2005, page 2. Therefore, the Examiner concludes that the composition of *Kolc* “can be used for lanthionizing the keratin fibers as claimed.” Final Office Action, page 5. Applicants respectfully disagree.

Schoon clearly distinguishes “Low pH Reducers” and “Other Alkaline Reducers” i.e., the “[h]ighly alkaline products” by using different headings. *See Schoon*, pages 191-192. And *Schoon* teaches that only the “[h]ighly alkaline products” can create the lanthionine cross-link. *See id.* at page 192. In addition, *Schoon* teaches that the low pH reducers “are less effective in straightening hair, especially resistant hair.” *Id.* at page 191.

Consistent with the teaching in *Schoon* and as known by one of ordinary skill in the art, a reducing composition such as that disclosed in *Kolc* can, at best, temporarily straighten the thin or brittle hair, but not permanently, because the breaking of the disulfide bonds in the hair by a reducing composition is a reversible process. *See* Rule 132 Declaration, page 2 (emphasis added). On the other hand, the lanthionizing composition claimed in the present invention can permanently straightening hair by forming lanthionine cross-link, which is an irreversible process. Thus, the reducing composition disclosed in *Kolc* is different from the lanthionizing composition claimed in the present invention.

¹ Applicants reasonably believe that the Examiner has made a typographic error in the Office Action, page 5, line 5, in reciting page 191 of *Schoon* instead of page 11. Applicants respectfully request clarification of the record.

Since the compositions of *Kolc* have a different pH than the compositions of the claimed invention, the compositions of *Kolc* cannot have the same ingredients in the same amounts as the compositions of the claimed invention. Therefore, the compositions of *Kolc* are not identical and do not anticipate the instant claims.

Accordingly, as the compositions disclosed in *Kolc* are not identical as the composition recited in the instant claims, this rejection is improper and should be reversed and withdrawn.

III. Rejection under 35 U.S.C. § 103(a)

The Examiner has maintained the rejection of claims 6-8, 16, 25, 41-43, 51, 60, 68, and 74 under 35 U.S.C. § 103(a) as being unpatentable over *Kolc* in view of U.S. Patent No. 5,753,215 ("*Mougin*"). Final Office Action, page 3. Applicants respectfully disagree and traverse this rejection for at least one of the following reasons.

In order to carry the initial burden of establishing a *prima facie* case of obviousness, the Examiner must first show that the prior art references teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The Examiner must also show that there is some suggestion or motivation, either in the references or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references. *In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998). The suggestion or motivation "must be found in the prior art reference, not in the Applicant's disclosure." *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991).

The Examiner has failed to point to any evidence to satisfy either one of the two requirements. As discussed above, *Kolc* merely teaches a mild alkaline permanent wave reducing composition, which is different from a lanthionizing composition. The Examiner's reliance on *Mougin* is limited to its teaching of organic nucleophiles and polyvalent metal salts to remedy *Kolc*'s deficiency of lack of such teachings. Final Office Action, page 3. *Mougin* nowhere teaches or suggests that its composition can be used to lanthionize keratin fibers.

On the contrary, *Mougin* teaches away from the high pH levels required for lanthionizing keratin fibers. According to *Mougin*, "cosmetic compositions according to the invention generally have a pH approximately between 7 and 7.2." *Mougin*, col. 6, lines 43-44. Thus, neither *Kolc* nor *Mougin* teaches a composition for lanthionizing keratin fibers.

Moreover, if one assumes for the sake of argument that *Kolc* does teach a composition for lanthionizing keratin fibers, there is no motivation to combine *Kolc* with *Mougin* since *Mougin* teaches away from using its compositions at such a high pH. For at least these reasons, this rejection is improper and should be reversed and withdrawn.

In addition, the Examiner has not met his burden to establish a *prima facie* case of obviousness since he has failed to point to any evidence of a suggestion or motivation to modify the composition of *Kolc* "by incorporating the lysine, argining compounds and polyvalent salts" disclosed in *Mougin*.

Specifically, *Mougin* discloses a cosmetic composition comprising a pseudo-latex. *Mougin*, col. 1, lines 7-9. The pseudo-latex consists of "particles of a film-forming radical polymer containing carboxylic acid functions neutralized to a degree of

neutralization between 10 and 80% using a polyfunctional neutralizing agent consisting either of a diamine or of the combination of a polyvalent metal salt and an organic or inorganic base.” *Id.* at col. 1, lines 50-60. The “diamines as neutralizing agents are chosen from lysine, arginine or cystine.” *Id.* at col. 4, lines 26-27. Therefore, “the polyvalent salts and the lysine, argining compounds” disclosed *Mougin* are neutralizing agents for the pseudo-latex. The composition of *Kolc* does not include pseudo-latexes that require neutralization. Therefore, one of ordinary skill in the art would not be motivated to add any neutralizing agent to *Kolc*’s composition, much less the neutralizing agents of *Mougin*.

Applicants respectfully submit that the mere presence of a small overlap of “similar ingredients” between the references is not sufficient to modify or combine reference teachings. The Federal Circuit has clearly stated that the evidence of a motivation or suggestion to modify a reference must be “clear and particular.” *In re Dembicziak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). The Examiner can satisfy the burden of establishing a *prima facie* case of obviousness “only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to [modify or] combine the relevant teachings of the references.” *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) (citations omitted) (emphasis added). The Federal Circuit has reaffirmed the Examiner’s high burden to establish a *prima facie* case of obviousness and has emphasized the requirement of specificity. *See In re Sang-Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). The Examiner’s conclusory statement that *Mougin* is in “analogous art” of a “hair straightening

composition" is too vague to satisfy such a high burden set forth by the Federal Circuit, especially in view of the teachings of the reference as a whole as described herein.

Therefore, as the Examiner has failed to establish a *prima facie* case of obviousness, Applicants respectfully request that the rejection be withdrawn.

IV. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application, and the timely allowance of the pending claims.

If the Examiner believes a telephone conference would be useful in resolving any outstanding issues, he is invited to call the Applicants' undersigned representative at (202) 408-4218.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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